

### **ABSTRACT OF THE DISCLOSURE**

An apparatus and a method decide and manage a coding mode for each motion estimated block without an operation of a system control unit in an image coding and without storing a detected SAD for each motion estimated block. The apparatus includes a motion estimation unit, a system control unit, and a comparator. The motion estimation unit detects an optimal sum of absolute differences (SAD) by a motion estimated block when a motion is estimated by using a current frame data and a previous frame data. The system control unit outputs a predetermined threshold related to the optimal sum of absolute differences. The comparator compares the optimal sum of absolute differences output from the motion estimation unit with the predetermined threshold and outputs information indicating the coding mode for a current motion estimated block. The information indicating the coding mode output from the comparator is expressed by using a bit. Thus, it is possible to effectively manage a capacity of a memory and an operation of the system control unit when the motion is estimated.